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| MICHAEL BUCHENHORN, P.A. | | | EXAMINER | |
| 8540 SW 83 STREET | | | KASSA, ZEWDU A | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/519,327

Applicant(s)

TRUONG ET AL.

Examiner

ZEWDU KASSA

Art Unit

2611

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma (US 7388919) in view of Mahany (US 5862171) and Admitted Prior Art (APA).**
3. As per claim 1, Varma teaches an adaptation method comprising adapting a variable transmission data rate in a transmitting node of a data communication system to a current link quality of a data communication channel (Varma, Col 1 L16-22) wherein the data rate is selected by the transmitting node from a set of transmission data rates depending on a number of successful transmissions (Varma, Col 2 L13-18), the number of successful transmissions being compared in the transmitting node against one of a first value corresponding to a first state of the transmitting node and a second value corresponding to a second state of the transmitting node (Varma, Claim 1) , the step of adapting comprising in the transmitting node

the steps of: operating in a first state in response to detecting a successful transmission (Varma, Col 2 L13-18); operating in a second state in response to detecting a successful transmission (Varma, Col 2 L13-18); detecting a faulty transmission and selecting a lower transmission data rate in response to the detection of one or more faulty transmissions (Varma, Col 2 L19-24, Col 2 L13-18).

4. Varma does not explicitly teach of three or more but less than ten transmissions; of ten or more transmissions. Admitted Prior Art (APA) teaches of three or more but less than ten transmissions; of ten or more transmissions (APA, Para [0006]). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of the APA into Varma since Varma teaches dynamic link adaptation based on comparing the number of successive ACK or NACK received from a receiver with threshold values to measure the link quality and to make adjustment (Varma, Col 2 L13-18 "successive", Abstract "first predetermined threshold", Col 5 L45-55 "second threshold") and; APA teaches the benefit of having at least ten successful transmission, in order to achieve a more accurate link quality measurement, before changing a high data rate and as a result to adapt the correct link parameters to control the flow of data between transmitter and receiver (APA, Para [0006]).

5. Varma does not explicitly teach selecting an adapted data transmission rate by selecting a new packet length different from an original packet length being used. Mahany teaches selecting an adapted data transmission rate by selecting a new packet length different from an original packet length being used (Mahany, Abstract, "wide range of operating conditions by adjusting its operating parameters. Such operating parameters include: ... data packet size ... The base transceiver is also responsive ... in determining whether to modify current data packet sizes"). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to implement the instant limitation, as taught by Mahany in the method of Varma because Varma teaches and suggests selecting different dynamic adaptation link parameters such as modulation scheme, symbol rate, error correction scheme and the like based on the channel(link) quality measurement for better throughput efficiency in general (Varma, Col 1 L18-22, L29-34, Abstract, Col 5 L16-26) and Mahany teaches and suggests the benefit of using communication link adaptive parameters such as to determine whether to modify current data packet sizes based on the channel(link) quality measurement for better quality of transmission or

throughput efficiency (Mahany, Abstract).

6. Claim 21 is similarly analyzed as claim 1.

7. As per claim 22, Varma teaches a data communication network comprising: a first node comprising a transmitter comprising a variable data transmission rate (Varma, Col 1 L16-22); a second node comprising a receiver (Varma, Fig. 1 item 2); and a link connecting the first and second nodes (Varma, Fig. 1 item 3); wherein the first node: operates in a first state in response to detecting a successful transmission (Varma, Col 2 L13-18); operates in a second state in response to detecting a successful transmission (Varma, Col 2 L13-18); and switches to a state of a lower data transmission rate in response to detecting one or more defective transmissions by a transmitting node in the network (Varma, Col 2 L19-24, Col 2 L13-18).

8. Varma does not explicitly teach of three or more but less than ten transmissions; of ten or more transmissions. Admitted Prior Art (APA) teaches of three or more but less than ten transmissions; of ten or more transmissions (APA, Para [0006]). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to

implement the teachings of the APA into Varma since Varma teaches dynamic link adaptation based on comparing the number of successive ACK or NACK received from a receiver with threshold values to measure the link quality and to make adjustment (Varma, Col 2 L13-18 "successive", Abstract "first predetermined threshold", Col 5 L45-55 "second threshold") and; APA teaches the benefit of having ten successful transmission, in order to achieve a more accurate link quality measurement, before changing a high data rate and as a result to adapt the correct link parameters to control the flow of data between transmitter and receiver (APA, Para [0006]).

9. Varma does not explicitly teach wherein the data transmission rate is changed by selecting a new packet length different from an original packet length being used. Mahany teaches wherein the data transmission rate is changed by selecting a new packet length different from an original packet length being used (Mahany, Abstract, "wide range of operating conditions by adjusting its operating parameters. Such operating parameters include: ... data packet size ... The base transceiver is also responsive ... in determining whether to modify current data packet sizes"). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to implement the instant limitation, as taught by Mahany, in the data communication network of Varma because Varma teaches and suggests

selecting different dynamic adaptation link parameters such as modulation scheme, symbol rate, error correction scheme and the like based on the channel(link) quality measurement for better throughput efficiency in general (Varma, Col 1 L18-22, L29-34, Abstract, Col 5 L16-26) and Mahany teaches and suggests the benefit of using communication link adaptive parameters such as to determine whether to modify current data packet sizes based on the channel(link) quality measurement for better quality of transmission or throughput efficiency (Mahany, Abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZEWDU KASSA whose telephone number is (571)270-5253. The examiner can normally be reached on Monday - Friday (7:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571 272 3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

zk

/David C. Payne/

Supervisory Patent Examiner, Art Unit 2611